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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,933	12/14/2001	Tzung-Chin Chang	9818-061-999	1499

20583 7590 03/17/2004

JONES DAY  
222 EAST 41ST STREET  
NEW YORK, NY 10017

EXAMINER

WELLS, KENNETH B

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/017,933

Applicant(s)

CHANG ET AL.

Examiner

Kenneth B. Wells

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-10,12-15 and 17-19 is/are allowed.
- 6) ☒ Claim(s) 20-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

Art Unit: 2816

1. The amendments filed on 12/24/03 have been entered as part of the RCE application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 10 and 15 are objected to because of the following informalities: in claim 1, "the second transistor" on line 11 lacks clear antecedent basis because two different "second transistors" have been previously recited and applicant should amend the claim to make it clear which is being referred to on line 11. Lines 9 and 10 of claim 1 have the same problem with regard to the recitation of "the first transistor". Also in claim 1, on line 8, "a" should be changed to --the-- since the power supply node has already been set forth on lines 4-5. Finally in claim 1, the recitation on lines 11-12 is incorrect because it indicates that both FETs T11 and T13 in instant Fig. 4 receive the same control signal which is not the case, i.e., FET T13 receives VCCSEL whereas FET T11 receives its inverse (note the same type of problem on lines 20-21).

It is also noted that claims 10 and 15 have the same types of problems as noted above with regard to claim 1 and

Art Unit: 2816

accordingly should be corrected as well in response to this office action.

Also note that the word "binds" on the last line of claim 15 is apparently a typographical error.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the control signals VCCSEL and /VCCSEL being based on the power supply level of the Schmitt trigger circuit must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. Claims 20-26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Shin.

See the previous office actions for the details of this rejection.

Art Unit: 2816

6. Claims 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin in view of O'Shaughnessy et al (newly cited).

Modifying the Shin Schmitt trigger circuit so that the control signals which adjust the upper and lower trip point levels are based on the power supply level, though not disclosed by Shin, nevertheless would have been obvious to those having ordinary skill in the art because such is old and well-known in the art as taught by O'Shaughnessy et al. This reference discloses the advantages of being able to set different power supply levels and adjust the trip threshold correspondingly (see Fig. 7). The skilled artisan will easily recognize that the benefits/advantages taught by O'Shaughnessy et al would apply equally in any Schmitt trigger circuit where it is desired or required to be able to vary the power supply level of the circuit.

7. Claims 1, 3-10, 12-15 and 17-19 are allowed.

These claims are allowable in view of the limitation that only one of the plurality of first or second circuits provides a path between the first/third node and the power supply/reference node at any one time, i.e., if one of the paths is conducting,

Art Unit: 2816

the other must be off (which is not the case in Schmitt triggers disclosed by Shin).

8. Applicant's arguments filed on 12/24/03 have been fully considered but they are not persuasive.

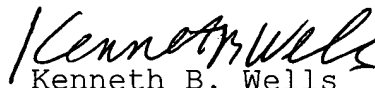
The argument that Shin does not have plural path providing circuits is not persuasive because it is incorrect, i.e., there are four path providing circuits within trigger voltage adjusting portion 35 and also within trigger voltage adjusting portion 36. The term "circuit" is broadly interpreted by the examiner as, inter alia, any path between first and second nodes With at least one component or element therebetween. It is noted that applicant has not set forth any specific definition of the term "circuit" in the instant specification. Therefore, to the extent that applicant's two-transistor pathways can be interpreted as "circuits", so too can the one-transistor pathways of Shin.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is (571)272-1757. The examiner can normally be reached on Monday through Friday from 8:30am to 5:00pm.

Art Unit: 2816

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at (571)272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kenneth B. Wells  
Primary Examiner  
Art Unit 2816

March 5, 2004